**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A method of optical imaging of vulnerable atherosclerotic plaque of an animate subject involving administering an optical imaging contrast agent with affinity for an abnormally expressed biological target associated with vulnerable atherosclerotic plaque, wherein said biological target is selected from: matrix metalloproteinase 9, Toll-like receptors, scavenger receptors, oxidized LDL, oxidation products of lipids and their adducts with protein, angiotensin II receptors and collagens, wherein the contrast agent is fluorescent and has a molecular weight below 7,000 Daltons and is of formula I:

V-L-R, (I)

wherein:

V is one or more vector moieties having affinity for said abnormally expressed target in vulnerable atherosclerotic plaque, and is selected from peptides, peptoid moieties, oligonucleotides, oligosaccharides, fat-related compounds, and traditional organic drug-like small molecules, wherein V has a molecular weight of less than 2500 Daltons;

L is a linker moiety or a bond; and

R is one or more reporter moieties detectable in optical imaging and is a cyanine dye with an absorption maximum in the range 600 to 1300 nm.

2. (Cancelled) The method as claimed in claim 1 wherein the contrast agent has a molecular weight below 14,000 Daltons.

3. (Cancelled) The method as claimed in claim 1 wherein the contrast agent is of formula I

V-L-R, (I)

wherein V is one or more vector moieties having affinity for the abnormally expressed target in vulnerable atherosclerotic plaque as defined in claim 1, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging.

4. (Cancelled) The method as claimed in claim 1, where the contrast agent comprises a contrast agent substrate, wherein the target is an abnormally expressed enzyme, such that the contrast agent changes pharmacodynamic properties and/or pharmacokinetic properties upon a chemical modification from a contrast agent substrate to a contrast agent product upon a specific enzymatic transformation.

5. (Cancelled)

6. (Cancelled) The method as claimed in claim 3 wherein V is selected from peptides, peptoid moieties, oligonucleotides, oligosaccharides, fat-related compounds, and traditional organic drug-like small molecules.

7. (Cancelled) The method as claimed in claim 3 wherein R is a dye that interacts with light in the wavelength region from the ultraviolet to the near-infrared part of the electromagnetic spectrum.

8. (Currently amended) The method of claim 1 where the ~~a~~ contrast agent is provided as a pharmaceutical composition together with at least one pharmaceutically acceptable carrier or excipient.

9. (Cancelled)

10. (Cancelled)

11. (Previously presented) The method as claimed in claim 1 for the diagnosis of vulnerable atherosclerotic plaque, for follow up of the progress of vulnerable atherosclerotic plaque

development, for follow up of treatment of vulnerable atherosclerotic plaque or for surgical guidance.

12. (Cancelled)

13. (Cancelled)